



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box-1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,693	07/15/2003	Hiroyuki Kiso	240302US0	7054
22850	7590	07/11/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			COONEY, JOHN M	
			ART UNIT	PAPER NUMBER

1711

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/618,693

Applicant(s)

KISO ET AL.

Examiner

John m. Cooney

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-38 is/are pending in the application.
- 4a) Of the above claim(s) 5-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4 and 29-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1711

Applicant's arguments filed 4-27-06 have been fully considered but they are not persuasive.

The following rejections are maintained or set forth as new in light of applicants' amendments:

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 29-33, and 36-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants' recitations of effective amounts of their catalyst components to impact properties as set forth in the claims are not supported by the originally filed supporting disclosure in a manner that it is evident that applicants' invention was described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. This is a new matter invention.

Applicants' supporting disclosure, including page 12 lines 5-12, lacks showing of support for possession of ranges of amount values for their respective catalyst components as now defined by the claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,4, 29-33, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lancaster et al.(4,585,804), alone, or in view of Naka et al.(4,742,089).

Lancaster et al. discloses combinations of catalysts inclusive of triethylene diamine, dimethylethylamine, other amine and metal catalysts, and mixtures thereof (see column 3 line 64 – column 4 line 3, as well as, the entire document).

Lancaster et al. differs from applicants' claims in that combination and specific amounts are not specified. However, Lancaster et al. are clear in their recitation of their usefulness as urethanation catalysts. Accordingly, it would have been obvious for one having ordinary skill in the art to have employed mixtures thereof of the recited species of catalysts as catalysts combinations within the teachings of Lancaster et al. for the purpose of adequately performing their urethanation catalytic effect in order to arrive at

Art Unit: 1711

the products of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. Further, it has long been held that where the general conditions of the claims are disclosed in the prior art, discovering the optimal or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Reese* 129 USPQ 402 . Further, a prima facie case of obviousness has been held to exist where the proportions of a reference are close enough to those of the claims to lead to an expectation of similar properties. *Titanium Metals v Banner* 227 USPQ 773. (see also MPEP 2144.05 I) Similarly, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

As to the selection of N,N,N',N'-tetramethyl-1,6-hexanediamine and N,N-dimethylcyclohexylamine, Naka et al. demonstrates these to be equivalent to triethylenediamine for purposes of urethane catalysis (see column 4 lines 40-60 & lines 41,42,43,and 59). Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the equivalent N,N,N',N'-tetramethyl-1,6-hexanediamine and N,N-dimethylcyclohexylamine catalysts of Naka et al. in substitution for the equivalent triethylenediamine tertiary amine catalyst of Lancaster et al. for the purpose of imparting their urethanation imparting effect in order to arrive at the products of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. It is prima facie obvious to substitute equivalents, motivated by the reasonable expectation that the respective species will behave in a comparable manner or give comparable results in comparable circumstances. *In re Ruff* 118 USPQ

Art Unit: 1711

343; *In re Jeze/* 158 USPQ 99; the express suggestion to substitute one equivalent for another need not be present to render the substitution obvious. *In re Font*, 213 USPQ 532.

Claims 1,4, and 29-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canaday et al.(4,760,099), alone, or in view of Naka et al.(4,742,089).

Canaday et al. discloses combinations of catalysts inclusive of triethylene diamine, dimethylbutylamine, and mixtures thereof, and other tertiary amines and foam catalysts (see column 11 line 35 - column 12 line 11, as well as, the entire document).

Canaday et al. differs from applicants' claims in that combination and specific amounts are not specified. However, Canaday et al. are clear in their recitation of their usefulness as urethanation catalysts. Accordingly, it would have been obvious for one having ordinary skill in the art to have employed mixtures thereof of the recited species of catalysts as catalysts combinations within the teachings of Canaday et al. for the purpose of adequately performing their urethanation catalytic effect in order to arrive at the products of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. Further, it has long been held that where the general conditions of the claims are disclosed in the prior art, discovering the optimal or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Reese* 129 USPQ 402 . Further, a prima facie case of obviousness has been held to

Art Unit: 1711

exist where the proportions of a reference are close enough to those of the claims to lead to an expectation of similar properties. *Titanium Metals v Banner* 227 USPQ 773. (see also MPEP 2144.05 I) Similarly, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

As to the selection of N,N,N',N'-tetramethyl-1,6-hexanediamine and N,N-dimethylcyclohexylamine, Naka et al. demonstrates these to be equivalent to triethylenediamine for purposes of urethane catalysis (see column 4 lines 40-60 & lines 41,42,43,and 59). Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the equivalent N,N,N',N'-tetramethyl-1,6-hexanediamine and N,N-dimethylcyclohexylamine catalysts of Naka et al. in substitution for the equivalent triethylenediamine tertiary amine catalyst of Canaday et al. for the purpose of imparting their urethanation imparting effect in order to arrive at the products of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. It is prima facie obvious to substitute equivalents, motivated by the reasonable expectation that the respective species will behave in a comparable manner or give comparable results in comparable circumstances. *In re Ruff* 118 USPQ 343; *In re Jeze/* 158 USPQ 99; the express suggestion to substitute one equivalent for another need not be present to render the substitution obvious. *In re Font*, 213 USPQ 532.



Applicants' arguments have been considered in light of the above rejections. However, rejection is held to be properly set forth and maintained.

The following was set forth previously, and is maintained herein as still being applicable:

**Result Must Compare to Closest Prior Art:**

Where a definite comparative standard may be used, the comparison must relate to the prior art embodiment relied upon and not other prior art – *Blanchard v. Ooms*, 68 USPQ 314 – and must be with a disclosure identical (not similar) with that of said embodiment: *In re Tatincloux*, 108 USPQ 125.

**Results Must be Unexpected:**

Unexpected properties must be more significant than expected properties to rebut a prima facie case of obviousness. *In re Nolan* 193 USPQ 641 CCPA 1977.

Obviousness does not require absolute predictability. *In re Miegel* 159 USPQ 716.

Since unexpected results are by definition unpredictable, evidence presented in comparative showings must be clear and convincing. *In re Lohr* 137 USPQ 548.

In determining patentability, the weight of the actual evidence of unobviousness presented must be balanced against the weight of obviousness of record. *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *In re Beattie*, 24 USPQ 2d 1040.

**Claims Must be Commensurate With Showings:**

Evidence of superiority must pertain to the full extent of the subject matter being claimed. *In re Ackerman*, 170 USPQ 340; *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *Ex Parte A*, 17 USPQ 2d 1719; accordingly, it has been held that to overcome a reasonable case of prima facie obviousness a given claim must be commensurate in scope with any showing of unexpected results. *In re Greenfield*, 197 USPQ 227. Further, a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288. See also *In re Kulling*, 14 USPQ 2d 1056.

Applicants' have not persuasively demonstrated unexpected results for the catalyst combinations of their claims. Comparisons have not been made with the prior art embodiment relied upon. Applicants have not demonstrated their results to be clearly and convincingly unexpected and more than mere optimizations of the knowledge in the art or more significant than being secondary in nature. Applicants' showings are not commensurate in scope with the broadly encompassed (claim 1)



Art Unit: 1711

and/or specifically recited (claim 4) ranges of amount values claimed. Applicants' have not demonstrated their showing to be commensurate in scope with the scope of combinations now claimed.

Applicants' arguments and recitations of effective amount indications in the claims do not sufficiently address or overcome examiner's positions of obviousness set forth above. Applicants' do not set forth criticality associated with the combinations of catalysts claimed for the ranges of amount values encompassed by the claims which is commensurate in scope with the scope of the claims as they stand. The data referred to in applicants' reply and discussed in the interview is not commensurate in scope with the scope of applicants' claims. Nor has it been adequately demonstrated that the discoveries referred to in applicants' reply are more significant than expected results associated with the combinations of catalysts of the instant concern.

Applicants' arguments regarding Naka et al. have been considered. However, lacking the blowing agents referred to by applicants' claims does not negate Naka et al.'s applicability to the instant claims because such elements are not required components of applicants' claimed invention. Examiner's position of "equivalence" as set forth in the rejection above is maintained as proper, and the necessity for a clear and convincing showing of new or unexpected results commensurate in scope with the scope of the claims is maintained to be properly required.

It is not agreed that applicants' comparative data of record is commensurate in scope with scope with the scope of applicants' claims since the results do not demonstrate a commensurate in scope showing of new or unexpected results attributed to the combinations of catalysts now claimed over the ranges of values now claimed.

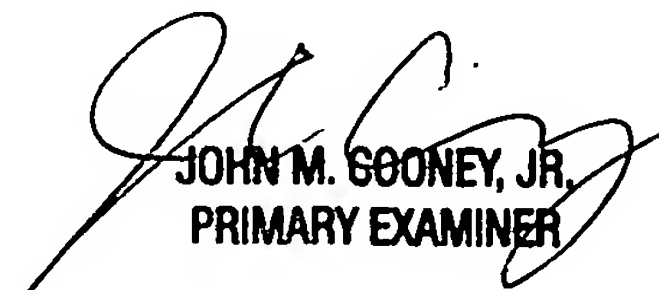
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Cooney whose telephone number is 571-272-1070. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
JOHN M. COONEY, JR.  
PRIMARY EXAMINER  
Group 1711